United States Patent

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[72] Inventors **Albert Mitchell**
725 E. 4th St., Royal Oaks, Mich. 48067;
Leonard L. White, 27165 Bradford Lane,
Southfield, Mich. 48075

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[54] **CONDENSER SUPPORT**
7 Claims, 5 Drawing Figs.

[52] **U.S. Cl.** **248/22,** 248/156
[51] **Int. Cl.** **F16f 15/00**
[50] **Field of Search** 248/22, 20, 21, 19, 23, 12, 13, 127, 188.8, 188.1, 188.9, 156, 127, 146, 154; 52/292, 299

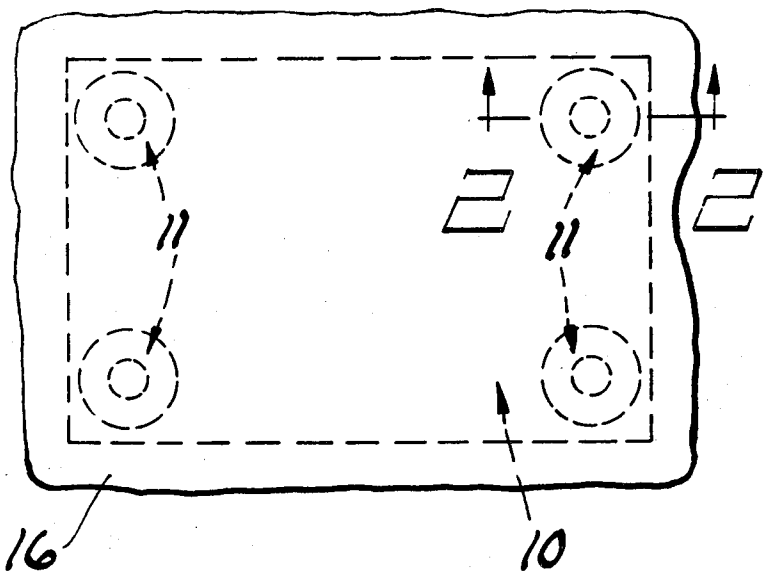
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Primary Examiner—J. Franklin Foss
Attorney—Donnelly, Mentag & Harrington

ABSTRACT: An air conditioner condenser support member which is used in multiple units to form an insulated condenser base in lieu of a concrete base. The condenser support comprises an elongated rigid tubular member having an open lower end and a closed upper end. An outwardly extended flange is secured to the tubular member for engaging the ground and limiting the movement of the tubular member into the ground when the open end of the tubular member is inserted into the ground. The tubular member is provided with a resilient pad on the upper closed end thereof for insulation, noise reduction and vibration-dampening function. In use, at least four of the condenser supports are inserted into the ground, in a substantially rectangular disposition to form a mounting pad for an air conditioner condenser unit.



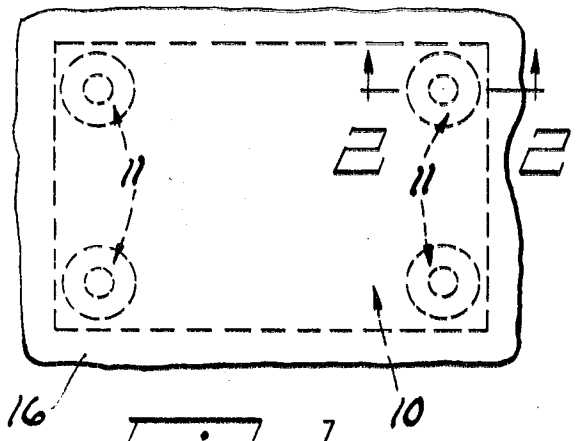


Fig. 1

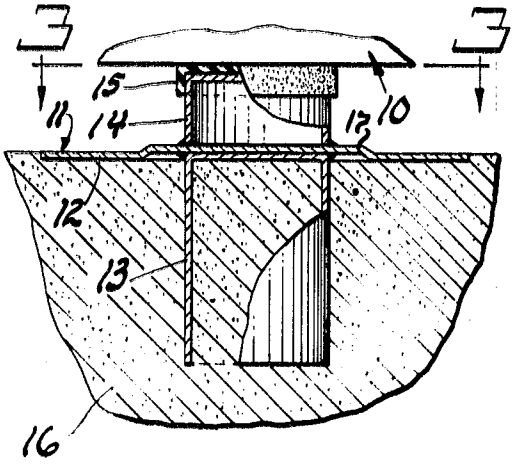


Fig. 2

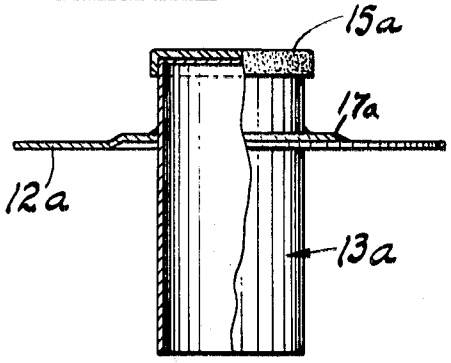


Fig. 4

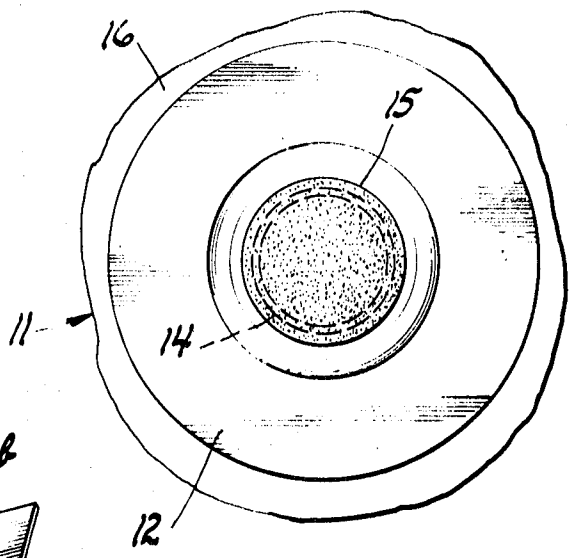


Fig. 3

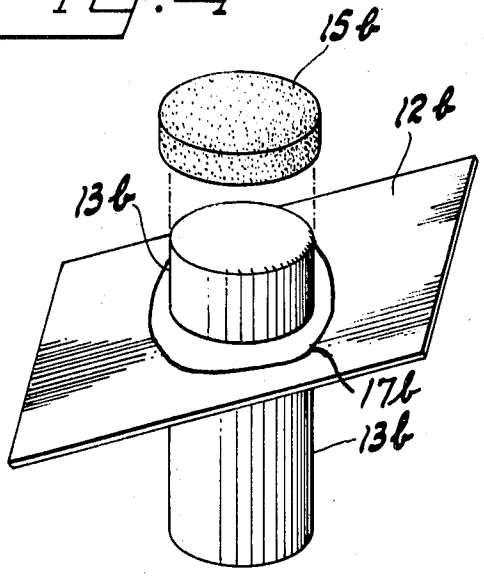


Fig. 5

INVENTORS.
ALBERT MITCHELL
BY LEONARD L. WHITE
Donnelly, Ixenteg & Herrington
ATTORNEYS

CONDENSER SUPPORT

SUMMARY OF THE INVENTION

Heretofore it was necessary when installing an air conditioner condenser unit to provide a concrete base which was either poured in place or formed as a slab at a concrete factory and then transported to the location of use. In either case, concrete bases have disadvantages because more than one man are required to provide a concrete base, and the installation of a concrete base involves much time, high material cost and high labor costs. In view of the foregoing, it is an important object of the present invention to provide a novel and improved air conditioner condenser support for forming a condenser base which overcomes the aforementioned disadvantages of the prior art air conditioner condenser concrete bases.

It is another object of the present invention to provide a novel and improved air conditioner condenser support which eliminates the use of a concrete base, and which is simple and compact in structure, economical to manufacture and install, and efficient in operation.

It is still another object of the present invention to provide a novel and improved air conditioner condenser support which can be used for all types of residential air conditioner condenser units and which is adapted to save installation time and costs. The air conditioner condenser support of the invention is adapted for use in units of four to provide a quickly formed base which insulates the condenser, reduces noise and service problems, and which further comprises a vibration-dampening pad. An air conditioner condenser base formed with supports made in accordance with the present invention supports a condenser above the ground surface so as to form a natural acoustic barrier.

It is a further object of the present invention to provide a novel and improved air conditioner condenser support which includes an elongated tubular member having an open lower end and a closed upper end, an outwardly extended flange secured to the tubular member for engaging the ground and limiting the movement of the tubular member into the ground, and a resilient pad on the upper closed end of the tubular member.

Other objects, features and advantages of this invention will be apparent from the following detailed description, appended claims, and the accompanying drawing.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a plan view of a schematically illustrated air conditioner condenser mounted on a base formed by four condenser supports made in accordance with the principles of the invention.

FIG. 2 is an enlarged, elevational section view of one of the condenser supports illustrated in FIG. 1, taken along the line 2—2 thereof, and looking in the direction of the arrows.

FIG. 3 is a horizontal view of the condenser support illustrated in FIG. 2, taken along the line 3—3 thereof, and looking in the direction of the arrows.

FIG. 4 is a side elevational view, partly in section, of a second embodiment of the invention.

FIG. 5 is an exploded, perspective view of a third embodiment of the invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to the drawing, and in particular to FIG. 1, the numeral 10 designates generally a conventional air conditioner condenser unit mounted on four supports 11 made in accordance with the principles of the invention. FIG. 2 shows the first illustrative embodiment of the invention as comprising a first elongated, hollow rigid member 13 which is open on the lower end thereof and enclosed by an integral end plate on the top end thereof. As shown in FIGS. 2 and 3, a circular

ground engaging flange 12 is attached to the closed top end of the hollow member 13. A second elongated, hollow rigid member 14 is attached to the top side of the circular flange 12 in a position aligned with the first hollow rigid member 13. The second hollow rigid member 14 is shorter than the first hollow rigid member 13 but it is made similar thereto. The lower end of the hollow rigid member 14 is open and the top end thereof is enclosed by an integral end plate.

The hollow members 13 and 14 and the flange 12 may be made from any suitable material, as for example from a suitable steel or plastic material. In one working embodiment, the hollow members 13 and 14, and the flange 12 were made from 14-gage deep-drawn steel and plated with zinc-dichromate and the rigid members 13 and 14 were welded to the flange 12.

As shown in FIGS. 2 and 3, the upper end of the hollow rigid member 14 is covered with a pad or cap member 15 which is made from any suitable resilient material, as for example, from a suitable rubber or plastic material. The cap member 15 is adapted to insulate the condenser from the ground, reduce noise and service problems, and provide a vibration-dampening action. The hollow rigid members 13 and 14 illustrated in FIGS. 2 and 3 are shown as having a circular cross section and a cylindrical outer configuration; however, it will be understood, that the hollow rigid members 13 and 14 may have other cross-sectional shapes, as for example they may be made with a square cross-sectional shape.

FIG. 4 illustrates a second embodiment of the invention wherein the hollow rigid members 13 and 14 are made as a unitary member illustrated by the numeral 13*a*. In this second embodiment the flange 12*a* is provided with a bore for the passage therethrough of the unitary member 13*a*. The flange 12*a* is illustrated as being welded to the unitary member 13*a*.

FIG. 5 is an exploded, perspective view of a third embodiment of the invention and showing a unitary hollow member 13*b* provided with a flat flange 12*b* which is square in plan view. The square flange 12*b* is slightly tilted for illustration purposes.

The embodiments of FIGS. 4 and 5 are provided with the shock-absorbing caps 15*a* and 15*b*, respectively. The embodiments of FIGS. 4 and 5 function in the same manner as the first embodiment of FIGS. 2 and 3.

As shown in FIGS. 2 and 3, the flange 12 is provided with a raised, inner annular portion 17 which forms a stiffening airlock and also provides high installation stability. Flange 12*a* in FIG. 4 is also provided with an airlock portion 17*a*. Flange 12*b* in FIG. 5 is also provided with an airlock portion 17*b*.

In use, four of the condenser supports 11 are quickly and easily pressed into the ground 16 at the desired location. The air conditioner condenser can then be installed by one man without any additional help or equipment. The condenser support of the present invention may be used in all types of ground which would support any standard cement slab installations. The supports 11 maintain the condenser at a height off the ground 16 to permit air circulation under the condenser 10.

It will be seen that the condenser supports 11 of the present invention are easier to install than cement slabs, and that they are cheaper to make, and that they can be installed with less manpower and in less time.

While it will be apparent that the preferred embodiments of the invention herein disclosed are well calculated to fulfill the objects above stated, it will be appreciated that the invention is susceptible to modification, variation and change.

WHAT WE CLAIM IS:

1. A support apparatus for insertion into the ground and for use in multiple numbers to form a support pad for an object comprising:

a. an elongated, hollow, rigid member having an open lower end for insertion into the ground, and a closed upper end;

b. a transversely extended ground engaging flange fixedly secured to said elongated, rigid member and operative to engage the surface of the ground when the open end of

the elongated, rigid member is inserted into the ground; and,

c. a resilient means mounted on the upper closed end of the elongated, rigid member for supporting an object and to absorb vibration, insulate, and reduce noise.

2. A support apparatus as defined in claim 1, wherein:

a. said hollow, rigid member is cylindrical in cross section.

3. A support apparatus as defined in claim 1, wherein:

a. said hollow, rigid member comprises a one-piece construction.

4. A support apparatus for insertion into the ground and for use in multiple numbers to form a support pad for an object comprising:

a. an elongated, hollow, rigid member having an open lower end for insertion into the ground, and a closed upper end;

b. a transversely extended ground engaging flange fixedly secured to said elongated, rigid member and operative to

engage the surface of the ground when the open end of the elongated, rigid member is inserted into the ground;

c. a resilient means mounted on the upper closed end of the elongated, rigid member for supporting an object and to absorb vibration and reduce noise; and,

d. said hollow, rigid member comprising a first portion secured to the lower side of said flange, and a second portion secured to the upper side of said flange.

5. A support apparatus as defined in claim 1, wherein:

a. said flange is round in plan configuration.

6. A support apparatus as defined in claim 1, wherein:

a. said flange is provided with a raised inner annular portion which forms an airlock.

7. A support apparatus as defined in claim 1, wherein:

a. said flange is square in plan configuration.